

using an air classifier.<sup>74</sup> For purposes of designing its current coal cleaning plants, TXU apparently did not agree with these proposed CQ design features as TXU has not implemented any of the features into its current cleaning plants and does not anticipate doing so.<sup>75</sup> Accordingly, it is unlikely that TXU would agree to pay any royalty for these alleged trade secrets.

*Information Regarding the Use and Benefits of and Rationale for Dry Cleaning*

40. CQ also identifies “[i]nformation regarding the use and benefits of dry cleaning technologies for TXU’s projected application” and certain rationale for using dry cleaning as outlined in its December 22, 2004, bid.<sup>76</sup> Years before TXU’s November 2004 call for proposals, TXU heard presentations from coal cleaning experts touting the viability of dry cleaning lignite.<sup>77</sup> TXU was informed that forms of dry coal cleaning dated to the late 1800s and air jigs were developed in the 1930s.<sup>78</sup> Therefore, any alleged CQ trade secrets would represent only incremental information beyond the information previously provided to TXU. In fact, TXU was skeptical of wet cleaning for lignite at the time it issued its call for proposals as Covol’s bid acknowledged:

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<sup>74</sup> Plaintiff’s Supplemental Answer to First Set of Interrogatories.

<sup>75</sup> Alderman Affidavit, 3; Pickens Affidavit, 6 – 8; Discussions with Kasie Pickens.

<sup>76</sup> Plaintiff’s Supplemental Answer to First Set of Interrogatories.

<sup>77</sup> Alderman Affidavit, 1, 4-5; TXU Presentation: Dry Cleaning for Texas Lignites, [TXU006074 - 108]; Dry Cleaning Technology/Economics/Mercury Reduction, a Seminar for TXU Mining, Inc., May 2003; J.K. Alderman and R.J. Snoby, “Improving Power Plant Performance and Reducing Emissions through the Use of Pneumatic Dry Cleaning for Low Rank Coal,” Presentation to SME Meeting, Denver, Colorado, February 26-28, 2001 [ACT000135 - 45].

<sup>78</sup> Alderman and Snoby Presentation to SME Meeting, 5,7 [ACT000139, 41].

The prior experience with wet cleaning at Big Brown has given rise to doubts among TXU Mining staff for the applicability of water-based cleaning processes (water-only and heavy medium) for Texas lignite . . . .

[Covol] has concluded that a dry pneumatic process, incorporating air jigs, would be the most appropriate technology for the initial beneficiation plant at Twin Oak. The advantages we perceive for dry cleaning are enumerated below . . . .

It is important to have buy-in from TXU personnel at a corporate level, mine level, and at the Big Brown station. Given the prior experience with wet processing, dry cleaning provides an effective alternative.<sup>79</sup>

41. The fact that Mr. Snoby, the president of Allmineral, publicly touted the benefits of dry cleaning coal significantly increases the likelihood that the incremental information represented by the alleged CQ trade secrets is very limited. Accordingly, the amount, if any, that TXU would have been willing to pay for this alleged CQ trade secret would be minimal.

*Selection of Air Jig and Recommendations for Methods of Use*

42. CQ also cites its recommendation to use the Allmineral air jig as well as its recommendation for the methods of use as additional misappropriated trade secrets.<sup>80</sup> Here again, if faced with a hypothetical negotiation, TXU would have been willing to pay a royalty only for the incremental information that the alleged trade secret would provide beyond that already available or known. As previously mentioned, TXU was well aware of Allmineral's air jig through

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<sup>79</sup> Covol Bid, 3 - 4 [TXU006743 - 4].

<sup>80</sup> Plaintiff's Supplemental Answer to First Set of Interrogatories.

Messrs. Snoby and Alderman, and TXU also received a bid from Covol that proposed the use of the air jig.<sup>81</sup> Perhaps even more important to understanding the limited value of this alleged trade secret is the fact that TXU has not used the air jig in the manner proposed by CQ and is also incorporating air tables, which CQ did not propose, into its dry cleaning plants.<sup>82</sup>

*Information Regarding Plant Size, Coal Cleanability, and the Mining Plan*

43. CQ contends that "information regarding the selection of the optimal size for a cleaning plant by integrating economy-of-scale of the cleaning plant, the cleanability of various parts of the coal or lignite reserve being mined . . . and the mining plan" included on page II-3 of CQ's bid constitutes a trade secret.<sup>83</sup> CQ further states that the use of these trade secrets led CQ to recommend targeting exclusively run-of-mine lignite rather than waste lignite.<sup>84, 85</sup> TXU's current cleaning plant cleans a mix of waste and run-of-mine lignite, contrary to CQ's recommendation.<sup>86</sup> Additionally, I understand that the relative trade-offs between cleaning run-of-mine and waste lignite are the types of information that are very specific to each mine and each seam within the mine. This variability is one of the reasons TXU developed data through the operation of the DOE pilot plant and the demonstration plants rather than relying on general

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<sup>81</sup> Richard Snoby, Letter to Gerry Pearson re: technical articles on the Allair Jig, September 4, 2002 [AM036]; Covol Bid, 4 [TXU006744].

<sup>82</sup> Pearson Deposition, 75-77, 99; Oak Hill Business Case, 1-2 [TXU006265 - 6].

<sup>83</sup> Plaintiff's Supplemental Answer to First Set of Interrogatories.

<sup>84</sup> As used in the bid documents, "run-of-mine" refers to coal that is sent to the power plant under normal conditions. "Waste" or "opportunity" coal, which is taken from the boundaries of seams, is not sent to the power plant under normal conditions. Harrison Deposition, 75; Pickens Deposition, 102.

<sup>85</sup> Plaintiff's Supplemental Answer to First Set of Interrogatories.

<sup>86</sup> Pickens Affidavit, 6; Pickens Deposition, 96 - 98.

recommendations from CQ. Therefore, the incremental value of this alleged CQ trade secret represents little, if any, value to TXU.

**Information Regarding Mine Productivity by Reducing Out-of-Seam Dilution**

44. CQ identifies its seventh alleged trade secret as:

[i]nformation regarding the increasing of mining productivity by reducing the amount of care taken to prevent out-of-seam dilution from mixing with run-of-mine lignite. This can reduce mining costs and largely eliminate the production of waste lignite without reducing the quality of the lignite delivered to the power station because the cleaning plant removes the out-of-seam dilution.<sup>87</sup>

45. The benefits of coal cleaning generally, and dry cleaning specifically, are well known in the coal mining industry, and TXU had been informed of these benefits, including potential cost savings and increased utilization of waste lignite, prior to the issuance of its call for proposals in November 2004. Further, the bid verbiage that CQ cited as containing this alleged trade secret was framed as "one option to consider."<sup>88</sup> As such, any royalty TXU would be willing to pay for this alleged trade secret would be minimal.

**Information Related to Rate of Removal of Ash-Forming Minerals**

46. As its eighth alleged trade secret, CQ cites: "[i]nformation that when ash-forming minerals are removed by cleaning coal or lignite, the ash-forming

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<sup>87</sup> Plaintiff's Supplemental Answer to First Set of Interrogatories.

<sup>88</sup> CQ Bid, II-4 [CQ00120].

minerals are not removed at the same rate. . . .”<sup>89</sup> However, the variability in the rate of removal of ash-forming minerals during the cleaning process is generally known in the coal cleaning industry.<sup>90</sup> Additionally, CQ personnel acknowledge that the concept that ash-forming minerals have varying rates of removal from cleaned coal was published in an EPRI-commissioned report on cleaning Texas lignite in August of 1989 and that TXU had a copy of that report.<sup>91</sup> Therefore, any value to TXU of this alleged CQ trade secret would entail only the incremental information provided by the alleged trade secret. The royalty amount, if any, that TXU would be willing to pay for this incremental information is minimal.

*Equation/Methodology for Predicting Mercury Concentration*

47. CQ characterizes “the equation and methodology for predicting the concentration of mercury in cleaned lignite as given on page II-10 of CQ Inc’s [sic] bid on December 22, 2004” as a trade secret that TXU has misappropriated.<sup>92</sup> CQ ostensibly realizes the lack of value associated with this alleged trade secret as evidenced by the acknowledgement in the bid itself that:

The R<sup>2</sup> for the [mercury concentration] equation is only 31 [sic], so the accuracy of the prediction of the mercury content of the clean lignite may be very poor. The mercury content of the ROM

<sup>89</sup> Plaintiff’s Supplemental Answer to First Set of Interrogatories.

<sup>90</sup> Combustion Engineering, Inc. for Electric Power Research Institute, “Impacts of Cleaning Texas Lignite on Boiler Performance and Economics,” GS-6517, Research Project 2425-1, Final Report, August 1989, 3-6 [TXU 006815 - 987; TXU006865].

<sup>91</sup> Clifford Raleigh, Jr., Deposition Testimony, December 20, 2006, 179 - 180, 186 – 187; Akers Deposition, 42, 44 – 45.

<sup>92</sup> Plaintiff’s Supplemental Answer to First Set of Interrogatories.

lignite was taken as the average mercury content of all the core samples.<sup>93</sup>

48. Additionally, TXU would have been unwilling to pay a royalty to CQ for a low-R<sup>2</sup> regression equation that it could easily generate itself using an Excel spreadsheet function.<sup>94</sup> In fact, CQ personnel have acknowledged that this regression equation is unlikely to provide any value to competitors.<sup>95</sup>

**Projections of Cleaning Plant Performance**

49. CQ also claims that “[a]ll projections of cleaning plant performance including ash, sulfur, and mercury content and heating value of the clean coal; ash, sulfur and mercury reduction obtained by cleaning; and the amount of energy or mass in the run-of-mine coal that is recovered in the clean coal” contained in its bid constitutes a trade secret.<sup>96</sup> TXU has not used this alleged trade secret as this type of information is generally available.<sup>97</sup> Further, as CQ personnel have noted, the efficacy of coal cleaning varies with the characteristics of the coal being cleaned, which, in turn, varies from one mine to another and even within the same mine, and the technologies used in the cleaning process.<sup>98</sup> Therefore, it is unlikely that TXU would have been willing to pay CQ any royalty for the incremental information contained in this alleged trade secret.

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<sup>93</sup> CQ Bid, II-10 [CQ00126].

<sup>94</sup> Alderman Report, 4.

<sup>95</sup> Akers Deposition, 271.

<sup>96</sup> Plaintiff's Supplemental Answer to First Set of Interrogatories.

<sup>97</sup> Snoby Deposition, 107-108, 116, 117-118.

<sup>98</sup> Akers Deposition, 18 - 19.

### Lack of Value

50. Based on the foregoing discussion and analysis of CQ's alleged trade secrets, any amount TXU would have been willing to pay CQ for its alleged trade secrets, individually and in total, is approaching zero. As summarized in Table 3, significant elements of CQ's alleged trade secrets were 1) not used by TXU, 2) publicly available or generally known, 3) publicly disclosed by CQ.

**Table 3. Negative Value Influences on CQ's Alleged Trade Secrets**

No.	Alleged Trade Secret	Not Used by TXU	Generally Available	Known by TXU	Disclosed by CQ
1.	Capital and operating cost estimates	✓	✓		✓
2.	Layout drawings and equipment lists	✓	✓		✓
3.	Certain flow sheet design features	✓			✓
4.	Information re: use and benefits of and rationale for dry cleaning		✓	✓	✓
5.	Selection of air jig and recommendations for methods of use	✓	✓		✓
6.	CQ's recommendation that the cleaning plant target run-of-mine coal	✓			✓
7.	Information re: increased mine productivity	✓	✓		✓
8.	Information re: rate of removal of ash-forming minerals	✓	✓	✓	✓
9.	Equation/methodology for predicting mercury concentration	✓	✓		✓
10.	Projections of cleaning plant performance	✓	✓		✓

51. Additionally, CQ has also acknowledged that some of the alleged trade secrets were of poor quality/reliability, were site-specific to a single TXU lignite mine, and/or were of no value to a competitor. Therefore, CQ could not have expected—and TXU would not have agreed to pay—anything approaching the royalty Mr. Vollmar has assumed for CQ's alleged trade secrets.

### Mr. Vollmar's Speculation and Overstatement of Damages

52. Mr. Vollmar's royalty-based damages are speculative and overstate any potential damages related to TXU's alleged misappropriation of trade secrets

because he 1) bases his calculations on inappropriate data, 2) relies upon benefits TXU has not received, 3) inappropriately extrapolates his calculations beyond existing facilities, and 4) utilizes an artificially low discount rate, thus increasing the alleged damages.

53. Mr. Vollmar bases his royalty calculation on TXU's December 18, 2006, "business case" analysis, which was prepared to evaluate the potential expansion of TXU's demonstration cleaning facility at the Oak Hill mine. This analysis is not an appropriate basis for Mr. Vollmar's royalty calculation for the reasons discussed below.

**Understates TXU's Capital Expenditures**

54. While the projections include all benefits expected from the entire plant's operations, only the incremental capital costs are included in the analysis, thus understating TXU's total cost (and overstating its projected net benefit) from the Oak Hill facility.

**Bases Calculations Solely on Projections Stretching to 2020**

55. The "business case" upon which Mr. Vollmar bases his royalty-based damages is merely one of many evaluations of coal cleaning projects that TXU has performed since early 2005. This "business case" depends upon many key assumptions and projects benefits and costs stretching to the year 2020; it does not quantify any actual costs and benefits that TXU has received from cleaning lignite to date. The results of these various "business cases" have varied dramatically over time, evidencing their sensitivity to assumption changes and underscoring the risk in relying upon any one scenario.

Bases Calculations on the Expansion of a Single Existing Facility

56. Since the Oak Hill facility has been in operation for a number of months, the operations and maintenance cost assumptions included in the projections may not be reflective of the cost assumptions for an unproven, start-up facility that TXU would have been assessing in early to mid-2005. Additionally, the “business case” relied on by Mr. Vollmar is a best case scenario since TXU is proposing to expand only the Oak Hill demonstration plant while not expanding the Thermo demonstration plant.<sup>99</sup>

Ignores Value of TXU Experimentation

57. Mr. Vollmar ignores the value TXU gained by assuming the risk to construct and operate a pilot facility and two demonstration facilities and determining, based upon the differing results at Oak Hill and Thermo, the effectiveness of lignite cleaning.

58. By extrapolating the projected benefit per ton from the Oak Hill expansion to other mines without discussion, analysis, or adjustment, Mr. Vollmar implicitly assumes 1) that TXU will actually pursue lignite cleaning at these mines and 2) that TXU’s cost-benefit per ton would be the same for all mines. First, given that TXU has built two demonstration plants and one appears to provide economic value while the other does not,<sup>100</sup> Mr. Vollmar’s assumption that TXU will choose to incur the risk and cost to design and construct cleaning facilities at additional mines is speculative. Second, even assuming new facilities will be constructed at additional mines, Mr. Vollmar’s assumption that these

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<sup>99</sup> Discussions with Patrick Drake.

<sup>100</sup> Patrick Drake, Deposition Testimony, September 12, 2006, 28 - 30.

facilities will provide the same benefits and incur the same costs as the Oak Hill expansion project is speculative in light of Mr. Akers' acknowledgement that the proposed cleaning technologies/methodologies could vary (even between dry cleaning versus wet cleaning) from one mine to another due to the variability of coal.<sup>101</sup>

**Ignores Benefits from Technologies not Proposed by CQ**

59. Mr. Vollmar's royalty-based damages are also overstated and speculative because he ignores that a portion of the benefits projected in TXU's "business case" is derived from using air tables rather than air jigs although CQ's bid included no air tables.<sup>102</sup> Further, he assumes that 100 percent of the feedstock volume is included in the royalty base even though CQ proposed cleaning only the fines and passing the coarse through without cleaning to the power plant.<sup>103</sup> As noted, Mr. Vollmar also fails to identify any causal link between the alleged misappropriation of CQ's trade secrets and any of TXU's anticipated benefits from cleaning lignite.

**Utilizes Unreasonably Low Discount Rate**

60. Mr. Vollmar's use of an 8 percent discount rate overstates the present value of his royalty-based damages. A discount rate should reflect the risk of the cash flow streams to which it is applied, and higher discount rates result in lower net present values. Considering the risk of regulatory changes, functional obsolescence due to emerging technologies, changes in fuel mix, and changes in TXU's strategic or tactical objectives, among others, Mr. Vollmar's choice of an 8

<sup>101</sup> Akers Deposition, 18 - 19.

<sup>102</sup> Oak Hill Business Case, 1 [TXU006265]; CQ Bid, II-14 [CQ00130].

<sup>103</sup> CQ Bid, II-14 [CQ00130]; Vollmar Report, Exhibit F.

percent discount rate is unsupported and results in overstated damages, even assuming his methodology and remaining assumptions are valid.<sup>104</sup>

### **Inconsistency Between CQ's Lost Profits Claims and Royalty Claim**

61. As discussed above, Mr. Vollmar's lost profits calculation assumes that CQ is entitled to lost profits of \$0.75 per ton over a six-year period while his royalty-based damages assumes that CQ is entitled to a running royalty rate of \$0.40 per ton through the year 2020. While I do not agree with the methodology or conclusion of Mr. Vollmar's lost profits damages quantification, comparing his lost profits assumption of \$0.75 per ton to his royalty assumption of \$0.40 per ton demonstrates an illogical and inconsistent contrast.

62. Per Mr. Vollmar's explicit or implicit assumptions, in order to earn \$0.75 per ton, CQ would have to form a new legal entity, secure real estate access, design and build two coal cleaning plants, purchase necessary equipment, employ project management and labor, incur the risk of operating these two plants profitably for six years, and somehow recover the net book value of the equipment at the end of the six-year period. However, his royalty calculation assumes that in exchange for providing TXU with nothing more than the alleged trade secrets contained in its bid documents, CQ could expect to negotiate a \$0.40 royalty on every ton of lignite that TXU cleans through the year 2020. This comparison further demonstrates the degree of speculation and unreasonableness of Mr. Vollmar's royalty-based calculations that results in a disproportionate allocation of any potential value to the alleged trade secrets.

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<sup>104</sup> Ultimately, however, a discount rate applied to the claimed royalty amount is irrelevant since the only appropriate royalty claim is for past use of the alleged trade secrets as discussed below.

### **Analysis of *Georgia-Pacific* Factors**

63. As a part of his royalty analysis, Mr. Vollmar discussed the framework of the factors outlined in the *Georgia-Pacific* patent case.<sup>105</sup> While an analysis of the *Georgia-Pacific* factors may be instructive in assessing royalties in a trade secrets matter, one must keep in mind that the *Georgia-Pacific* case specifically addresses royalty damages on patents and incorporates the important distinction that patents provide the patent holder the ability to exclude, an aspect that does not apply to trade secrets.

64. My consideration of the *Georgia-Pacific* factors follows:

*Factor 1: The royalties received by the [licensor] for the licensing of the [trade secrets] in suit, proving or tending to prove an established royalty.*

65. I concur with Mr. Vollmar when he states that "CQ has not licensed its trade secrets relating to dry coal cleaning."<sup>106</sup> As noted above, CQ has never designed, constructed or operated a dry cleaning operation. Additionally, many of the elements of the cost estimates, compilation of industry and technical information, and consulting recommendations that CQ characterizes as trade secrets are either publicly available information or site- and process-specific to the proposed TXU plants. As such, no market demand exists for these "trade secrets." Factor 1's influence on the hypothetical royalty is neutral.

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<sup>105</sup> Vollmar Report, 5 – 10; *Georgia-Pacific Corp. v. United States Plywood*, 318 F. Supp. 1116 (S.D.N.Y. 1970), modified and affirmed, 496 F.2d 295 (2d Cir. 1971).

<sup>106</sup> Vollmar Report, 5.

*Factor 2: The rates paid by the licensee for the use of other [trade secrets] comparable to the [trade secrets] in suit.*

66. Mr. Vollmar indicated that he was not aware of any TXU licensing activities related to dry coal cleaning.<sup>107</sup> I understand that TXU has entered into no licensing agreements or otherwise paid for intellectual property rights of any kind related to dry coal cleaning with the exception of retaining coal cleaning experts, who were paid a fee for their services. Factor 2's influence on the hypothetical royalty is neutral.

*Factor 3: The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.*

67. Mr. Vollmar assumes that under the proposed hypothetical negotiation, CQ would grant TXU a non-exclusive license for its alleged trade secrets. All other factors being equal, a non-exclusive license would reduce the value of the license to the licensee, thus also reducing the royalty that the non-exclusive licensee would be willing to pay. However, Mr. Vollmar fails to address the effective territorial restriction of the alleged trade secrets due to their site-specific nature. As CQ's David Akers noted, recommendations developed and analyses performed related to a specific site have limited applicability to other sites. In fact, Mr. Akers indicated that if he were providing a recommendation for a different TXU lignite mine, he might recommend a wet cleaning process rather

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<sup>107</sup> Vollmar Report, 5.

than a dry cleaning process.<sup>108</sup> Thus, from CQ's express limitations of the scope of their recommendations provided to TXU, it is clear that, to the extent TXU received any value related to CQ's alleged trade secrets, such value was limited to the sites to which the recommendations were addressed. Factor 3 has a downward impact on the hypothetical royalty.

*Factor 4: The licensor's established policy and marketing program to maintain its [trade secret-related] monopoly by not licensing others to use the invention or by gaining licenses under special conditions designed to preserve that monopoly.*

68. Despite Mr. Vollmar's Factor No. 3 assumption that CQ's license would have been a non-exclusive license, he states relative to Factor No. 4 that "CQ had no intention of entering into a license for the use of its trade secrets."<sup>109</sup> Assuming that CQ's alleged trade secrets had marketable value, it may have been economically prudent for it to accept a lower royalty rate to encourage TXU to enter into the licensing agreement in order to establish credentials in the dry cleaning of coal. CQ admittedly had no prior experience in designing, building, or operating a dry coal cleaning facility.<sup>110</sup> Further, CQ's senior management indicated that the company was very interested in working with TXU on coal cleaning projects and had made many previous attempts to sell work to TXU.<sup>111</sup>

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<sup>108</sup> Akers Deposition, 18 - 19.

<sup>109</sup> Vollmar Report, 6.

<sup>110</sup> Harrison Deposition, 25 - 26.

<sup>111</sup> Harrison Deposition, 19, 28, 39 - 40.

In CQ's president's words, CQ had "waited a long time to get started on a lignite project with TXU."<sup>112</sup>

69. As noted above, significant differences exist between patents and trade secrets, and one of those key differences is the inherent right to exclude that a patentee enjoys within the scope of its patent. By their nature, trade secrets do not afford the power to exclude and lose virtually all of their economic value when publicly disclosed. Factor 4 has a downward influence on the hypothetical royalty.

*Factor 5: The commercial relationship between the licensor and the licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.*

70. Mr. Vollmar opines that "CQ and TXU are direct competitors for designing, building and operating of TXU facilities for the dry cleaning of coal."<sup>113</sup> Clearly, CQ and TXU are not competitors in the sense contemplated under *Georgia-Pacific* Factor No. 5. Factors 4 and 5 address the licensor's cost of granting a license, e.g., the opportunity costs of licensing a competitor to the detriment of the licensor's future third-party sales. As discussed above, TXU is engaged in the generation, transmission, and delivery of electric power while CQ is engaged in the provision of consulting and outsourcing services related to coal cleaning, alternative fuel technology, and floor finishing. Mr. Vollmar's limiting his discussion of Factor 5 to TXU's dry coal cleaning facilities stretches the

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<sup>112</sup> Harrison Deposition, 19.

<sup>113</sup> Vollmar Report, 6.

*Georgia-Pacific* analysis beyond plausibility and underscores the tenuous underpinnings of his royalty analysis and CQ's trade secrets claim.

71. However, if CQ were to license its alleged trade secrets to TXU, CQ would likely not then be asked to construct and operate a coal cleaning plant for TXU. Therefore, Factor 5 may have a slight upward influence on the hypothetical royalty.

*Factor 6: The effect of selling the [trade secret-related] specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of its non-[trade secret-related] items; and the extent of such derivative or convoyed sales.*

72. Mr. Vollmar again stretches the *Georgia-Pacific* framework to economic unreasonableness by refusing to discuss the two components cited in Factor 6 (*i.e.*, the impact of the trade secret-related feature(s) in promoting TXU's sales and its impact on generating sales for CQ). Rather, Mr. Vollmar states that because TXU might use the alleged trade secrets at other TXU facilities, such potential future use at undisclosed facilities would "tend to increase the royalty rate."<sup>114</sup> Simply put, neither CQ nor Mr. Vollmar has provided any evidence or suggestion that TXU can increase or has increased its sales through the use of the alleged trade secrets. Likewise, I am aware of no other dry coal cleaning project on which CQ has successfully commercialized any of the alleged trade secrets at issue in this matter. In fact, as discussed above, any value that these alleged trade secrets have is limited to the site to which they originally pertain.

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<sup>114</sup> Vollmar Report, 6.

73. Even more, to assume that TXU would pay a higher royalty rate because it could potentially use the alleged trade secrets at other TXU facilities defies economic logic and prudence. Mr. Vollmar's analysis—in at least three of his four scenarios—effectively double counts a portion of his calculated damages by applying the ostensibly higher royalty rate to the total throughput at all facilities. Mr. Vollmar's economically illogical conclusion demonstrates and flows from his misapplication and/or misunderstanding of the issues addressed by *Georgia-Pacific* Factor 6, which pertains to derivative sales. Factor 6's influence on the hypothetical royalty is neutral.

*Factor 7: The duration of the [trade secret] and the term of the license.*

74. Mr. Vollmar assumes that CQ's alleged trade secrets have an indefinite life. Especially considering the nature of the alleged trade secrets at issue in this matter, such an assumption is speculative.

75. Patents, for which the *Georgia-Pacific* framework was designed, have a definite term, during which the patentee enjoys an inherent right to exclude within the scope of that patent. The life of a trade secret, on the other hand, is limited to the period of time that such secret remains confidential and protected from disclosure. Also in contrast to patents, competitors are free to legally attempt to replicate the benefits of the trade secrets through replication or reverse engineering. Like patents, the life of a trade secret can be effectively shortened by functional obsolescence.

76. As noted above, many components of CQ's alleged trade secrets are, and have been for a number of years, publicly available. Further, CQ voluntarily

disclosed all of its alleged trade secrets in this matter through its filings with the Court.

77. Even had CQ not disclosed its alleged trade secrets, by designing, building, and operating the facilities at TXU, many of CQ's alleged trade secrets may have been subject to observation and replication by others. Additionally, with increased scrutiny on coal-burning emissions, new coal cleaning methodologies are being explored and developed, thus further diminishing the effective life of CQ's alleged trade secrets.<sup>115</sup> Furthermore, as acknowledged by CQ's president, TXU had the right to terminate its relationship with CQ at any time by providing written notice of termination and compensating CQ for its work performed prior to termination.<sup>116</sup> Factor 7 has a neutral impact on the hypothetical royalty.

*Factor 8: The established profitability of the product made under the [trade secret]; its commercial success; and its current popularity.*

78. Mr. Vollmar's discussion of Factor 8 cites two TXU "business cases," which project positive net present values from investing in dry cleaning facilities at some of its lignite mines. Mr. Vollmar then leaps to the conclusion that since these projections—which stretch to the year 2020 and are based on future expectations rather than historical results—anticipate a positive net present

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<sup>115</sup> D. Piller, "Rivals Push Coal-Cleaning Technologies," *Fl. Worth Star-Telegram*, February 15, 2007; Business Wire, "GE Energy Announces Availability of New Impulse Cleaning System for Enhanced Boiler Operation," February 20, 2007 <[www.digital50.com](http://www.digital50.com)>.

<sup>116</sup> Harrison Deposition, 250 - 252.

value, “[c]learly TXU determined that the technology was successful and very profitable.”<sup>117</sup>

79. Mr. Vollmar’s conclusion is flawed on at least three counts. First, Mr. Vollmar’s statements and methodology implicitly assume 1) that TXU’s projections anticipate that the cleaning facilities will utilize CQ’s alleged trade secrets, and 2) that the trade secrets positively impacted the economic benefits TXU anticipated.

80. Second, by preparing prospective long-term net present value “business cases,” TXU has certainly not “established [the] profitability of the product made under the [trade secret].” In fact, TXU continues to explore various coal cleaning alternatives to maximize effectiveness and minimize cost.<sup>118</sup> Because some TXU decision-makers were skeptical of the projected benefits of coal cleaning, TXU spent considerable time and money to determine whether dry cleaning would prove to be effective.<sup>119</sup> It assembled and operated the DOE five-ton-per-hour pilot facility during the latter part of 2005, then constructed and operated two demonstration facilities, one at the Oak Hill mine and the other at the Thermo mine.<sup>120</sup> While the Oak Hill facility appears to be economically feasible and is slated for expansion, the Thermo facility does not appear to add value and is not currently slated for expansion.<sup>121</sup> At the time of Mr. Vollmar’s proposed

<sup>117</sup> Vollmar Report, 7.

<sup>118</sup> Pearson Deposition, 76, 180 - 181.

<sup>119</sup> Discussions with Patrick Drake.

<sup>120</sup> Pickens Affidavit, 5.

<sup>121</sup> Oak Hill Business Case, 1 [TXU 006265]; Drake Deposition, 29 - 30; Discussions with Patrick Drake.

hypothetical negotiation between CQ and TXU, *i.e.*, early- to mid-2005, TXU had not determined whether dry cleaning its lignite was economically feasible.<sup>122</sup>

81. Third, as noted elsewhere in this report, CQ has failed to commercialize its alleged trade secrets and, since the CQ-proposed facilities have not been built, no evidence exists to support the premise that the plant(s) would have provided any economic benefit to TXU. Thus, due to the unproven nature of the alleged trade secrets, Factor 8 exerts downward pressure on the hypothetical royalty.

*Factor 9: The utility and advantage of the [trade secret-related] property over the old modes or devices, if any, that had been used for working out similar results.*

82. Mr. Vollmar addresses Factor 9 in conjunction with Factor 10.

*Factor 10: The nature of the [trade secret-related] invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.*

83. In addressing Factors 9 and 10, Mr. Vollmar states simply that 225 coal cleaning plants exist in the United States and that only 1 of these facilities employs dry cleaning technology. He then recites 4 reasons, from CQ's bid response, for CQ's selection of dry cleaning over wet cleaning and recites 4 anticipated benefits, from TXU's "business case," of "'coal cleaning with air

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<sup>122</sup> Pearson Deposition, 180 - 181; Kasie Pickens, Email to Cliff Raleigh, Dave Akers and Kip Alderman re: results of MS Air Jig tests, May 6, 2005 [CQ02440]; Discussions with Patrick Drake.

jigs/air tables.”<sup>123</sup> Mr. Vollmar offers nothing in the way of economic analysis or rationale on how his quotations/paraphrases support his assumed royalty equal to 25 percent of TXU’s projected savings. He also has made no attempt in his report to 1) identify the specific trade secrets he is attempting to value, 2) demonstrate that TXU has, in fact, utilized any of these alleged trade secrets, 3) establish a causal link between TXU’s use, if any, of the alleged trade secrets and any economic benefit TXU anticipates, much less has actually received to date. Even Mr. Vollmar’s quote from TXU’s “business case” includes discussion of air tables, a dry cleaning technology that CQ did not include in any of its proposals to TXU. Factors 9 and 10, therefore, have a downward influence on a hypothetical royalty.

*Factor 11: The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.*

84. Mr. Vollmar’s discussion of Factor 11 entails quoting TXU documents that discuss TXU’s current and anticipated coal cleaning facilities, potential feedstock throughput, and the projected net present value of coal cleaning.<sup>124</sup> He also repeats his previous quotes of TXU’s anticipated benefits from the dry cleaning of coal.<sup>125</sup> He then states that TXU, due to its current coal cleaning methodology, enjoys a competitive advantage and that TXU wished to keep this information

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<sup>123</sup> Vollmar Report, 7 - 8.

<sup>124</sup> Vollmar Report, 8 - 9.

<sup>125</sup> Vollmar Report, 8.

away from its competitors.<sup>126</sup> Mr. Vollmar opines that TXU has saved time and expense by misappropriating CQ's alleged trade secrets.<sup>127</sup>

85. Despite what Mr. Vollmar understands to be TXU's interest in keeping its pursuit of coal cleaning a secret from its competitors, he then paradoxically assumes that TXU is now able to "compete with CQ for customers."<sup>128</sup> Mr. Vollmar does not explain how TXU is to compete with CQ for customers in marketing its dry coal cleaning technology without disclosing its coal cleaning processes to its competitors, who ostensibly are also the customers for which it is purportedly competing with CQ. Interestingly, Mr. Vollmar offers no support or further discussion about TXU's purported competition with CQ for third-party customers, even in discussing the *Georgia-Pacific* factors that actually relate to that issue. As noted above, TXU has used few, if any, of the alleged trade secrets. Factor 11 exerts a significant downward influence on the hypothetical royalty.

*Factor 12: The portion of the profit or selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.*

86. Mr. Vollmar addresses Factor 12 in conjunction with Factor 13.

*Factor 13: The portion of the realizable profit that should be credited to the invention as distinguished from non-[trade secret-related] elements, the*

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<sup>126</sup> Vollmar Report, 9.

<sup>127</sup> Vollmar Report, 9.

<sup>128</sup> Vollmar Report, 9.